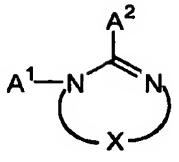
Attorney Docket: 1830/50521
PATENT

IN THE CLAIMS:

1.-34. (canceled).

35. (currently amended) A cyclic amidine compound represented by the formula (I):



(I)

wherein:

A^1 and A^2 are each a hydrogen atom, optionally substituted alkyl group wherein alkyl group is substituted with optionally substituted aryl group, or optionally substituted heterocyclic group; optionally substituted aryl group; or heterocyclic group selected from the group consisting of unsubstituted or substituted thiophen, unsubstituted or substituted furan, unsubstituted or substituted pyran, unsubstituted or substituted pyrrole, unsubstituted or substituted pyrazole, pyridine substituted with one or more of C_1-C_4 lower alkyl group or halogen atom, unsubstituted or substituted pyrimidine, unsubstituted or substituted pyrazine, unsubstituted or substituted pyridazine, unsubstituted or substituted imidazole, unsubstituted or substituted oxazole, unsubstituted or substituted isoxazole, unsubstituted or substituted isothiazole, unsubstituted or substituted quinoline, unsubstituted or substituted isoquinoline, unsubstituted or substituted indole, unsubstituted or substituted azaindole, and unsubstituted or substituted tetrahydropyrimidine; and

X is $-C(R^7, R^8)-C(R^9, R^{10})-C(R^{11}, R^{12})-$ wherein R^7, R^8, R^9, R^{10}, R^{11} and R^{12} are each a hydrogen atom; halogen atom; optionally substituted alkyl group; optionally substituted aryl group; or optionally substituted heterocyclic group;

or a pharmaceutically acceptable salt thereof.

36. (currently amended) The following compounds represented by the formula (I) of claim 35;

2- (6-chloro-3-pyridyl) – 1, 4, 5, 6-tetrahydropyrimidine;

2- (6-chloro-3-pyridyl) – 1-methyl-1, 4, 5, 6-tetrahydropyrimidine;

2- (6-chloro-3-pyridyl)methyl-1, 4, 5, 6-tetrahydropyrimidine;

2- (6-chloro-3-pyridyl)methyl-1-methyl-1, 4, 5, 6-tetrahydropyrimidine;

2- (tetrahydrofuran-3-yl) – 1, 4, 5, 6-tetrahydropyrimidine;

2- (tetrahydrofuran-3-yl)methyl-1, 4, 5, 6-tetrahydropyrimidine;

2- (5-bromo-3-pyridyl)methyl-1, 4, 5, 6-tetrahydropyrimidine;

2- (3-pyridyl)methyl-1, 4, 5, 6-tetrahydropyrimidine;

2- (3-aminophenyl) – 1, 4, 5, 6-tetrahydropyrimidine;

2- (3-quinolyl)methyl-1, 4, 5, 6-tetrahydropyrimidine;

2- (2-chloro-5-thiazolyl)-1, 4, 5, 6-tetrahydropyrimidine;

2- (3-quinolyl)-1, 4, 5, 6-tetrahydropyrimidine;

1- (6-chloro-3-pyridyl)methyl-1, 4, 5, 6-tetrahydropyrimidine;

2- (3, 5-dimethyl-4-isoxazolyl)methyl-1, 4, 5, 6-tetrahydropyrimidine;

2- (3-thienyl)methyl-1, 4, 5, 6-tetrahydropyrimidine;

1, 2-bis [(6-chloro-3-pyridyl) methyl] – 1, 4, 5, 6-tetrahydropyrimidine;

2- (5, 6-dichloro-3-pyridyl) methyl-1, 4, 5, 6-tetrahydropyrimidine;

2- (6-chloro-3-pyridyl)methyl-5-phenyl-1, 4, 5, 6-tetrahydropyrimidine;

2- (4-pyridyl)methyl-1, 4, 5, 6-tetrahydropyrimidine;

2- (2-chloro-3-pyridyl)methyl-1, 4, 5, 6-tetrahydropyrimidine;

2- (2, 6-dichloro-3-pyridyl)methyl-1, 4, 5, 6-tetrahydropyrimidine;

2- [2-(6-chloro-3-pyridyl)ethyl]-1, 4, 5, 6-tetrahydropyrimidine;

2- (6-methyl-3-pyridyl)methyl-1, 4, 5, 6-tetrahydropyrimidine;

2- (6-ethoxy-3-pyridyl)methyl-1, 4, 5, 6-tetrahydropyrimidine;

2- (6-fluoro-3-pyridyl)methyl-1, 4, 5, 6-tetrahydropyrimidine;

2- (6-chloro-3-pyridyl)methyl-5, 5-dimethyl-1, 4, 5, 6-tetrahydropyrimidine;

2- (2-pyridyl)methyl-1, 4, 5, 6-tetrahydropyrimidine;

1- (5, 6-dichloro-3-pyridyl)methyl-1, 4, 5, 6-tetrahydropyrimidine;

2- (6-chloro-3-pyridyl)methyl-4-methyl-1, 4, 5, 6-tetrahydropyrimidine;

1-[2-(6-chloro-3-pyridyl)ethyl]-1, 4, 5, 6-tetrahydropyrimidine;

1- (3-pyridazinyl)methyl-1, 4, 5, 6-tetrahydropyrimidine;

1- (6-methyl-3-pyridyl)methyl-1, 4, 5, 6-tetrahydropyrimidine;

1- (3-pyridyl)methyl-1, 4, 5, 6-tetrahydropyrimidine;

3-(6-chloro-3-pyridyl)methyl-1, 4, 5, 6-tetrahydro-1, 2, 4-triazine;

2- [1-(6-chloro-3-pyridyl)ethyl]-1, 4, 5, 6-tetrahydropyrimidine;

1- (2-chloro-5-thiazolyl)methyl-1, 4, 5, 6-tetrahydropyrimidine;

2- (2-chloro-5-thiazolyl)methyl-1, 4, 5, 6-tetrahydropyrimidine;

2- (5-pyrimidyl)methyl-1, 4, 5, 6-tetrahydropyrimidine;

2- (5-methyl-3-pyridyl)methyl-1, 4, 5, 6-tetrahydropyrimidine; and a pharmaceutically acceptable salt thereof.

37.-40. (canceled).

41. (new) A pharmaceutical composition comprising the compound or pharmaceutically acceptable salt thereof claimed in claim 35 or 36, as the active ingredient.

42. (new) A method of activating $\alpha 4\beta 2$ nicotinic acetylcholine receptors in a patient comprising administering an effective amount of a compound as claimed in claim 35 or 36 to said patient.

43. (new) A method of treating cerebral circulation diseases which comprises administering an effective amount of a composition claimed in claim 41.

44. (new) A method of treating neurodegenerative diseases, dementia, motor ataxia, and neuropathy and mental disease which comprises administering an effective amount of a composition claimed in claim 41.

45. (new) A method according to claim 44, wherein said neurodegenerative disease is Alzheimer's disease or Parkinson's disease, said dementia is cerebrovascular dementia, said motor ataxis is Tourette's syndrome, and said neuropathy and mental disease is neurosis during the chronic cerebral infarction stage, anxiety or schizophrenia.

46. (new) A composition according to claim 41, further comprising a pharmaceutically acceptable carrier or excipient for oral or parenteral administration.

47. (new) A composition according to claim 46, wherein said carrier or excipient is selected from the group consisting of polyvinyl pyrrolidone, gum Arabic, gelatin, sorbitol, cyclodextrin, magnesium stearate, talc, polyethylene glycol, polyvinyl alcohol, silica, lactose, crystalline cellulose, sugar, starch, calcium phosphate, vegetable oil, carboxymethycellulose, hydroxyl propylcellulose, sodium lauryl sulfate, water, ethanol, mannitol, syrup and mixtures thereof.

48. (new) A composition according to claim 47 in unit dosage form.

49. (new) A composition according to claim 46, wherein said carrier is an isotonic solution.

50. (new) A composition according to claim 42, comprising administering said compound orally.

51. (new) A method according to claim 50, wherein said effective amount is about 0.001-1,000 mg/kg body weight.

52. (new) A method according to claim 51, wherein said effective amount is 0.01-100 mg/kg body weight.

53. (new) A method according to claim 52, wherein said effective amount is 0.1-10 mg/kg body weight.

54. (new) A method according to claim 42, comprising administering said compound parenterally.

55. (new) A method according to claim 54, wherein said effective amount is about 0.001-1,000 mg/kg body weight.

56. (new) A method according to claim 55, wherein said effective amount is 0.01-100 mg/kg body weight.

57. (new) A method according to claim 56, wherein said effective amount is 0.1-10 mg/kg body weight.

58. (new) A compound according to claim 35, wherein the pharmaceutically acceptable salt is a salt of hydrochloric acid, hydrobromic acid, sulfuric acid, phosphoric acid, fumaric acid, maleic acid, ocxalic acid, citric acid, tartaric acid, malic acid, lactic acid, succinic acid, benzoic acid, methanesulfonic acid, and p-toluenesulfonic acid.